

To: Dickens, Brian[dickens.brian@epa.gov]; Loukeris, Constantinos[loukeris.constantinos@epa.gov]; Topinka, Natalie[topinka.natalie@epa.gov]; Wilwerding, Joseph[Wilwerding.Joseph@epa.gov]; Ostrand, Laurie[Ostrand.Laurie@epa.gov]; Marsh, Karen[Marsh.Karen@epa.gov]; Hambrick, Amy[Hambrick.Amy@epa.gov]
From: Mia, Marcia
Sent: Wed 10/11/2017 7:26:53 PM
Subject: RE: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions
[2016-11971.pdf](#)
[Chapter 11 - Compliance.pdf](#)

Here is my suggested response.

Mr. May,

Thank you for your question regarding how the 60.18 flare requirements apply during emergency releases from PRDs.

Ex. 5 - Deliberative Process, draft response

§60.482-4a Standards: Pressure relief devices in gas/vapor service.

(a) **Except during pressure releases**, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c).

(b)(1) **After each pressure release**, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482-9a.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485a(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a **control device as described in §60.482-10a** is exempted from the requirements of paragraphs (a) and (b) of this section.

[Emphasis added]

Ex. 5 - Deliberative Process, draft response

Marcia B Mia
Office of Compliance/Air Branch
2227A WJCS
U.S. Environmental Protection Agency
202-564-7042

-----Original Appointment-----

From: Mia, Marcia

Sent: Monday, September 18, 2017 8:20 AM

To: Mia, Marcia; Dickens, Brian; Loukeris, Constantinos; Topinka, Natalie; Wilwerding, Joseph; Ostrand, Laurie; Marsh, Karen; Hambrick, Amy

Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

When: Tuesday, October 10, 2017 3:00 PM-4:00 PM (UTC-05:00) Eastern Time (US & Canada).

Where: 1-866-299-3188; Ex. 6 - Personal Privacy

Let's get the brain trust together and walk thru this one.

M

From: Dickens, Brian
Sent: Wednesday, August 30, 2017 5:10 PM
To: Mia, Marcia
Cc: Topinka, Natalie; Loukeris, Constantinos
Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

I should say that I don't know OOOOa very well, and that I only had limited time to digest the emails below. I may be missing things, but here goes anyway...

I agree that **Ex. 5 - Deliberative Process**

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process as I see it.

Ex. 5 - Deliberative Process

Ex. 5 - Deliberative Process

So, I think

Ex. 5 - Deliberative Process
Ex. 5 - Deliberative Process

I hope I got close to being helpful

Brian

From: Mia, Marcia

Sent: Wednesday, August 30, 2017 2:58 PM

To: Loukeris, Constantinos <loukeris.constantinos@epa.gov>; Topinka, Natalie <topinka.natalie@epa.gov>

Cc: Wilwerding, Joseph <Wilwerding.Joseph@epa.gov>; Ostrand, Laurie <Ostrand.Laurie@epa.gov>; Dickens, Brian <dickens.brian@epa.gov>

Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

Can you give me your thoughts on this? I'm also adding Laurie and Joe for LDAR and Brian for flares.

Marcia B Mia

Office of Compliance/Air Branch

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Mia, Marcia

Sent: Thursday, August 17, 2017 9:23 AM

To: Loukeris, Constantinos <loukeris.constantinos@epa.gov>; Topinka, Natalie <topinka.natalie@epa.gov>
Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

Do either of you have any problem with this conclusion. Thanks.

Marcia B Mia

Office of Compliance/Air Branch

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Mia, Marcia
Sent: Monday, July 10, 2017 10:17 AM
To: Loukeris, Constantinos <loukeris.constantinos@epa.gov>; Topinka, Natalie <topinka.natalie@epa.gov>
Subject: FW: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

This consultant said the source is in R5 but don't have any more particulars. Wanted to run the draft response by you. Let me know what you think.

Marcia B Mia

Office of Compliance/Air Branch

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Mia, Marcia
Sent: Wednesday, July 05, 2017 12:18 PM
To: Hambrick, Amy <Hambrick.Amy@epa.gov>; Marsh, Karen <Marsh.Karen@epa.gov>
Cc: Witosky, Matthew <Witosky.Matthew@epa.gov>; Thompson, Lisa <Thompson.Lisa@epa.gov>
Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

Here is my suggested response to Mr. May after our call today. Pls let me know if you think it holds up/is clear.

Mr. May,

Thank you for taking time to speak with us today about the question regarding the 60.18 flare requirements during emergency releases from PRDs.

We now better understand your question, and can provide the following guidance.

Ex. 5 - Deliberative Process

§60.482-4a Standards: Pressure relief devices in gas/vapor service.

(a) **Except during pressure releases**, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485a(c).

(b)(1) **After each pressure release**, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482-9a.

Ex. 5 - Deliberative Process

Marcia B Mia

Office of Compliance/Air Branch

2227A WJCS

U.S. Environmental Protection Agency

202-564-7042

From: Mia, Marcia

Sent: Wednesday, May 31, 2017 5:26 PM

To: Hambrick, Amy <Hambrick.Amy@epa.gov>; Marsh, Karen <Marsh.Karen@epa.gov>; 'may@rtpenv.com' <may@rtpenv.com>

Cc: Witosky, Matthew <Witosky.Matthew@epa.gov>; Thompson, Lisa <Thompson.Lisa@epa.gov>

Subject: RE: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

Mr. May,

We have been discussing your questions so that we might provide the best guidance. We had the following questions and thoughts.

Does the flare receive emissions from other OOOOa regulated emissions sources, or only the regulated equipment at the gas plant? Similarly, is the CVS otherwise subject to 60.5411a?

Also, from your description, it appears that the pressure assist always actuates with the PRD release? If that is the case, then I'm not quite following why compliance with 60.18 wouldn't be required, as plainly written, in order to avail yourself of the exemption from monitoring.

To paraphrase and substitute your scenario for the requirement:

Paraphrased Requirement:

"Any pressure relief device that is equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device ***which complies with the requirements of § 60.18*** is exempt"

Your scenario:

The flare will operate in pressure assist mode only during pressure release events and during these times ***it doesn't comply with the requirements of 60.18*** (because it exceeds Vmax).

Outcome:

If that is the case, the exemption wouldn't apply because the requirement to comply with 60.18 isn't met. But I feel like I'm missing a nuance that you are trying to describe.

Let us know your thoughts on this initial walk through.

From: Phil May [<mailto:may@rtpenv.com>]
Sent: Wednesday, May 10, 2017 7:51 PM
To: Hambrick, Amy <Hambrick.Amy@epa.gov>
Subject: Subpart OOOOa Question Regarding Applicability of Flare 60.18 Vmax Requirement During Unforeseeable Malfunctions

Amy,

Thanks again for your time on the call today. This is the follow-up email that you requested after I laid out my question.

As noted during my call, as part of a proposed project to avoid having gases leak or vent to the atmosphere at an NSPS subpart OOOOa affected facility, a client would like to install a closed vent system controlled by a flare to control relief valve leakage and releases due to unforeseeable malfunctions. We're trying to confirm that the monitoring requirement in NSPS subpart VVa (40 CFR § 60.482-4a(b), by reference from 40 CFR § 60.5400a(a) in NSPS subpart OOOOa does not apply to the pressure relief devices served by this closed vent system. The planned flare is an air-assisted flare with a pressure-assist mode; the flare will operate in pressure-assist mode only during pressure release events. My regulatory analysis looks as follows:

1. The requirements in NSPS subpart OOOOa at 40 CFR §§ 60.5400a(a) and 60.5401a(b)(1) reference the requirements of NSPS subpart VVa, including 40 CFR § 60.482-4a(c), which provides the following exemption: *"Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system [emphasis added] capable of capturing and transporting leakage through the*

pressure relief device to a control device as described in § 60.482-10a is exempted.
...

2. Per the closed vent system and control device standards at §60.482-10a(d), *"Flares used to comply with this subpart shall comply with the requirements of § 60.18."*

As noted during our call, this is logical - if emissions from leaks will be controlled by a flare or other control device meeting the rule requirements, then there is no regulatory obligation to perform monitoring and repair to avoid those emissions. However, NSPS subpart OOOOa was developed after the *Sierra Club* decision, so it negates the generally applicable provisions regarding emissions during startup, shutdown, and malfunction events. Specifically, as 40 CFR § 60.5370a(b) states, the "provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to this subpart." Thus, per the definition of deviation at 40 CFR § 60.5430a, deviations include periods when the affected facility "facility *"Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, . . ."*

One of the applicable requirements of 40 CFR § 60.18 is the requirement at 40 CFR § 60.18(c)(5), which mandates that each air-assisted flare "shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6)." The planned flare will operate within V_{max} during normal operation, but could exceed V_{max} during a pressure release.

Based on this analysis, I'm left with the following questions

1. Does the flare need to be designed to be compliant with the V_{max} limitation during all pressure release events, including unforeseeable malfunctions, in order to qualify for the monitoring exemption at 40 CFR § 60.482-4a(c)?
2. If I install the properly sized flare for the foreseeable operation of the flare (i.e., relief valve leakage) and I have an unforeseeable malfunction that results in a velocity at the flare tip that is greater than V_{max} , is that a reportable deviation, and, if so, in the context of which requirements?
3. If I install the properly sized flare for the foreseeable operation of the flare (i.e., relief valve leakage) and I have an unforeseeable malfunction that results in a velocity at the flare tip that is greater than V_{max} , and I report that as a deviation, is that when the language at 40 CFR § 60.5370a(b) becomes applicable?

Thank you for your consideration of these questions.

Phillip May

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